

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

~~TRADE~~ In re Patent Application of

**Niclas Norrby**

Application No.: 10/791,800

Filed: March 4, 2004

For: METHOD FOR APPLYING ELASTIC MEMBERS ON A PANT-SHAPED ABSORBENT ARTICLE

# MAIL STOP PETITION

Group Art Unit: 1733

Examiner: JEFF H AFTERGUT

Confirmation No.: 5228

## TRANSMITTAL LETTER

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Sir:**

Enclosed is a Petition to Make Special under 37 C.F.R. 1.102(d) for the above-identified application.

Please charge the fee as required under 37 C.F.R. §1.17(h) to credit card. Form PTO-2038 is attached.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, 1.20(d) and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BUCHANAN INGERSOLL PC

Date: April 24, 2006

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Niclas Norrby

Application No.: 10/791,800

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For: METHOD FOR APPLYING ELASTIC  
MEMBERS ON A PANT-SHAPED  
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) **Mail Stop Petition**

) Group Art Unit: 1733

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**PETITION TO MAKE SPECIAL**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. 1.102(d), the Applicant requests advanced examination of the present application. Accompanying this Petition is the fee set forth in 37 C.F.R. § 1.17(h).

A pre-examination search was made for the subject matter claimed in the preliminary amendment filed on February 15, 2006. The search covered the following areas including the foreign art and publications:

Class 156 Subclasses: 161-164, 204, 229, 256, 264, 295, 494-499, 554;  
Class 604 Subclasses: 385.21-385.31.

During the course of the search, the following patents and U.S. publications were noted:

4,917,746	5,236,539	5,389,173	5,413,654	5,500,075	5,525,175
5,660,664	5,779,689	6,077,254	6,287,409	6,569,275	6,689,115
6,808,582	6,827,804	2002/0023706			

A copy of each of the references is being submitted herewith.

Following is a detailed discussion of the references which points out, with the particularity required by 37 C.F.R. § 1.111 (b) and (c), how the presently claimed subject matter is patentable over each reference.

Currently pending, with entry of the Second Preliminary Amendment being filed concurrently with this Petition to Make Special, are independent claim 1, with dependent claims 2-11 and 24-26, and independent claim 12, with dependent claims 13-23 and 27-28.

Claim 1 recites a method for applying an elastic member on an elastic web of material comprising: providing an elastic web of material running in a traveling direction; applying adhesive in a predetermined adhesive pattern on the web of material; applying a continuous elastic member in an elastic pattern on the adhesive, wherein the elastic member is applied in a direction of extension which deviates from the traveling direction at least within portions of the elastic member; applying a non-elastic web of material over the elastic web of material, wherein the non-elastic web of material is brought to cover the adhesive pattern, whereby the elastic member is locked between the elastic web of material and the non-elastic web of material in the applied position on the adhesive pattern; wherein the non-elastic web of material is given a band shape with a first non-linear edge and a second non-linear edge and the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

Claim 12 recites a method for applying an elastic member on an elastic web of material comprising: providing an elastic web of material running in a travelling direction; applying adhesive in a predetermined adhesive pattern on the web of material; applying a continuous elastic member and a non-elastic web of material on the adhesive such that the non-elastic web of material is brought to cover the adhesive pattern, wherein the elastic member is applied in a direction of extension which deviates from the traveling direction at least within portions of the elastic member and the elastic member is retained between the elastic web of material and the non-elastic web of material; wherein the non-elastic web of material is given a band shape with a first non-linear edge and a second non-linear edge and the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

Both claims 1 and 12 recite that the non-elastic web of material is given a band shape with a first non-linear edge and a second non-linear edge and the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern. Applicant understands the recitation of generally coincide to

mean that the outer contour or shape of the non-elastic web of material generally follows the outer contour or shape of the adhesive pattern. In addition, to avoid the adhesive being in an area not covered by the non-elastic web of material, the shape of the non-elastic web of material and the shape of the adhesive pattern are of the same general shape with only minor overlapping of the non-elastic web of material, an example of which is shown in Figure 1 of the present application.

#### 4,917,746

U.S. Patent No. 4,917,746 (the '746 patent) relates, generally, to a method and apparatus for applying an elastic ribbon in a curved path to a continuously moving web of material. A rotatable roll is moved essentially transversely to the direction of the moving web of material. The movement of the roll is imparted to the elastic ribbon which is then adhered to the continuously moving web of material. The elastic ribbon passes around the roll with a predetermined stretch. The axis of the roll may be disposed essentially transverse to the direction of movement of the moving web or essentially perpendicular to the direction of movement of the moving web. The roll may be cylindrical in shape with a uniform radius, it may have a nonuniform radius or it may have a portion of the surface with a larger radius intermediate to the ends of the roll.

The claimed subject matter is patentable over the '746 patent because the '746 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '746 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '746 patent does not disclose or suggest a combination that includes that the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

#### 5,236,539

U.S. Patent No. 5,236,539 (the '539 patent) relates, generally, to an apparatus for laying pre-stretched elastic threads in a curved path on a continuously advancing web of material includes at least one rotatable thread-guide roll. The roll is provided with a peripherally extending curved groove or slot whose axial amplitude controls the positioning of the threads on the web, and achieves the desired curvature of the

threads. The apparatus further includes a glue applicator for applying adhesive to the threads. The roll may conveniently have the form of a tube provided with through passing slots for guiding the threads straight through the tube and laying them onto the web.

The claimed subject matter is patentable over the '539 patent because the '539 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '539 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '539 patent does not disclose or suggest a combination that includes that the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

#### 5,389,173

U.S. Patent No. 5,389,173 (the '173 patent) relates, generally, to an apparatus for producing disposable diaper type products such as diapers per se and training pants in which leg elastic strands are captured between a pair of webs which are thereafter united with a fluff pad-equipped web and wherein guide members are employed for traversing the elastic strands to abut leg openings in the diaper type product.

The claimed subject matter is patentable over the '173 patent because the '173 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '173 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '173 patent does not disclose or suggest a combination that includes that the shape of a non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

#### 5,413,654

U.S. Patent No. 5,413,654 (the '654 patent) relates, generally, to disposable garments such as diaper and training pants and a method for attachment of threadlike continuous elastic members (each comprising a plurality of threadlike elastic elements) around leg-holes thereof so that the elastic members are progressively widened from their longitudinally opposite ends toward their

longitudinally middle portions, respectively. The threadlike continuous elastic members thus attached to the article around the respective leg-holes each comprises rubber threads. The traverse, arrangement support these rubber threads in parallel to one another and forcibly guide them in sine curves with respect to the continuous web so that the portions of the elastic members to be bonded to the continuous web are bonded thereto. Then, the non-bonded portions of the elastic members are cut together with the web along boundaries of the individual articles and thereupon contract under their own stretch stresses.

The claimed subject matter is patentable over the '654 patent because the '654 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '654 patent does not disclose or suggest a combination that includes a non-elastic web, as the topsheet of the '654 patent is disclosed to be stretchable. Also, the '654 patent does not disclose or suggest a combination that includes that the shape of the web of material is brought to generally coincide with the shape of the adhesive pattern.

#### 5,500,075

U.S. Patent No. 5,500,075 (the '075 patent) relates, generally, to a machine for applying elastic to material is provided that includes a conveyor for carrying material. The conveyor moves the material in one direction along a flow path. An elastic band storage with a plurality of elongate elastic bands is provided for application to the material. An elastic feeder has a feeder head that feeds the plurality of elastic bands directly onto the material while the feeder head moves laterally across the flow path. The lateral movement of the feeder head across the moving conveyor applies the elastic bands to the material in a curved contour. The feeder head is operable to feed the elastic bands onto the material while maintaining a selected spacing between individual elastic bands throughout the curved contour.

The claimed subject matter is patentable over the '075 patent because the '075 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '075 patent does not disclose or suggest a combination that includes that the shape of the

non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

5,525,175

U.S. Patent No. 5,525,175 (the '175 patent) relates, generally, to a distinctive apparatus and method for applying an elastic strand onto a moving substrate along a selected curvilinear path includes a transporting mechanism for moving the substrate along a selected substrate path and a supplying mechanism for supplying the elastic strand along a selected elastic path. An oscillating mechanism selectively changes a positioning of the elastic strand and includes a slidably movable guide which moves in a direction essentially transverse to said substrate path. The elastic strand slidably travels along the guide which positions the elastic strand such that the elastic strand is selectively applied to the substrate along the curvilinear path. A bonding mechanism selectively applies adhesive in an arrangement which selectively secures the elastic strand to the substrate. A rotatable nip roll contacts the elastic strand and the substrate to press the elastic strand onto the substrate along the curvilinear path.

The claimed subject matter is patentable over the '175 patent because the '175 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '175 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '175 patent does not disclose or suggest a combination that includes that the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

5,660,664

U.S. Patent No. 5,660,664 (the '664 patent) relates, generally, to a machine for applying elastic to material is provided that includes a conveyor for carrying material. The conveyor moves the material in one direction along a flow path. An elastic band storage with a plurality of elongate elastic bands is provided for application to the material. An elastic feeder has a feeder head that feeds the plurality of elastic bands directly onto the material while the feeder head moves laterally across the flow path. The lateral movement of the feeder head across the

moving conveyor applies the elastic bands to the material in a curved contour. The feeder head is operable to feed the elastic bands onto the material while maintaining a selected spacing between individual elastic bands throughout the curved contour.

The claimed subject matter is patentable over the '664 patent because the '664 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '664 patent does not disclose or suggest a combination that includes that the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

#### 5,779,689

U.S. Patent No. 5,779,689 (the '689 patent) relates, generally, to a disposable diaper comprises a liquid-impervious outer sheet, defining a narrower crotch region between two wider end or belt regions, an absorbent pad, fastening members for closing the diapers, and elastic members attached under tension to the impervious sheet on both sides of the absorbent pad, substantially over the whole length of the impervious sheet, with a higher tension in the crotch region than in the end regions (28, 29), having, in the two end regions, sections converging in the direction of the transverse edges of the impervious sheet, so that the elastic members form an elastic barrier which practically surrounds the absorbent pad and provide the impervious sheet both with a lengthwise elasticity in the crotch region and a transverse elasticity in the end regions.

The claimed subject matter is patentable over the '689 patent because the '689 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '689 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '689 patent does not disclose or suggest a combination that includes that the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

#### 6,077,254

U.S. Patent No. 6,077,254 (the '254 patent) relates, generally, to a disposable absorbent garment having a backing layer, an inner layer, and an absorbent pad



therebetween. The inner layer comprises an integral sheet having an opening extending therethrough through which exudates may move into a pocket formed between the backing and inner layers. A pair of elongate elastic members are secured to the inner layer in opposed, substantially mirror image curvilinear paths which overlap to encircle the opening. A method for producing such a garment also is described.

The claimed subject matter is patentable over the '254 patent because the '254 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '254 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '254 patent does not disclose or suggest a combination that includes that the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

#### 6,287,409

U.S. Patent No. 6,287,409 (the '409 patent) relates, generally, to a Methods and apparatus for applying elastic material in a curvilinear pattern on a continuously moving substrate. The method moves a substrate along a substrate path, supplies the elastic material to an oscillation unit first roll mounted for pivoting and rolling engagement with a transfer roll, the pivoting being about a pivot axis parallel to the substrate path, oscillates the oscillation unit first roll such that the first roll pivot axis oscillates in a plane generally traverse to the substrate path, applies the elastic material from the first roll to the transfer roll in the desired curvilinear path configuration, then applies the elastic material from the transfer roll to the substrate and bonds the elastic material to the substrate. Optionally the first roll may apply the elastic material directly to the substrate.

The claimed subject matter is patentable over the '409 patent because the '409 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '409 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '409 patent does not disclose or suggest a combination that includes applying a second web of any type of material. Accordingly, the '409 patent does not disclose or suggest a combination

that includes that the shape of a non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

6,569,275

U.S. Patent No. 6,569,275 (the '275 patent) relates, generally, to a method of applying leg elastics to absorbent garments involves varying the number and position of feed nips and idler rolls and optimizing the tension between multiple elastic members. The elastic members are bonded to a substrate with variable tension. More particularly, higher tension is provided in the areas of the garment where greater gasketing pressure is required, while lower tension is provided in areas where greater comfort is desired and high gasketing pressure is not needed. Furthermore, each elastic member may vary in degrees of tension from the other elastic members. The resulting garments have optimized comfort, fit and containment about the leg openings.

The claimed subject matter is patentable over the '275 patent because the '275 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '275 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '275 patent does not disclose or suggest a combination that includes that the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

6,689,115

U.S. Patent No. 6,689,115 (the '115 patent) relates, generally, to a pant-like absorbent garment adapted to the non-symmetrical nature and leakage demands of the anatomy of the human body has variable spacing and curvature among the elastic members bonded around the leg openings such that the spacing and/or curvature is asymmetrical with respect to the wearer's anterior and posterior sides. The spacing and curvature profiles of the elastic members are designed to accommodate various pressure demands around a wearer's legs during different activities. The resulting garment has optimized comfort, fit and containment about the leg openings.

The claimed subject matter is patentable over the '115 patent because the '115 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '115 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '115 patent does not disclose or suggest a combination that includes that the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

6,808,582

U.S. Patent No. 6,808,582 (the '582 patent) relates, generally, to a method of applying leg elastics to absorbent garments involves varying the number and position of feed nips and idler rolls and optimizing the tension between multiple elastic members. The elastic members are bonded to a substrate with variable tension. More particularly, higher tension is provided in the areas of the garment where greater gasketing pressure is required, while lower tension is provided in areas where greater comfort is desired and high gasketing pressure is not needed. Furthermore, each elastic member may vary in degrees of tension from the other elastic members. The resulting garments have optimized comfort, fit and containment about the leg openings.

The claimed subject matter is patentable over the '582 patent because the '582 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '582 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '582 patent does not disclose or suggest a combination that includes that the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

6,827,804

U.S. Patent No. 6,827,804 (the '804 patent) relates, generally, to a process for making a pants-type diaper without generation of waste material. The pants-type diaper is composed of a body fluid absorbent pad member curved in a U-shape, a front waist member and a rear waist member extending around front and rear waist-halves, respectively. The front and rear waist members are obtained by feeding first

and second elastic members in parallel to each other in a machine direction so as to describe substantially sinusoidal curves, respectively, securing these elastic members to one surface of a web fed in the machine direction and then transversely bisecting the web between the first and second elastic members. The first and second elastic members are symmetric to each other about a center line bisecting the web but phase-shifted with respect to each other in the machine direction by half a cycle of the substantially sinusoidal curve.

The claimed subject matter is patentable over the '804 patent because the '804 patent does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '804 patent does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '804 patent does not disclose or suggest a combination that includes that the shape of the non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

#### 2002/0023706

U.S. Patent Application Publication No. 2002/0023706 (the '706 publication) relates, generally, to methods and apparatus for applying elastic material in a curvilinear pattern on a continuously moving substrate. The method moves a substrate along a substrate path, supplies the elastic material to an oscillation unit first roll mounted for pivoting and rolling engagement with a transfer roll, oscillates the oscillation unit in a path generally transverse to the substrate path, applies the elastic material from the first roll to the transfer roll in the desired curvilinear path configuration, then applies the elastic material from the transfer roll to the substrate and bonds the elastic material to the substrate. Optionally the first roll may apply the elastic material directly to the substrate. Also at least two webs of elastic materials may be applied to a continuously moving substrate in at least two curvilinear substrate paths by supplying the elastic materials to a single transfer roll, applying the elastic materials from the transfer roll to the substrate and bonding the elastic materials to the substrate. The apparatus has a substrate transport apparatus, a rotatable transfer roll in rolling engagement with the substrate to press an elastic material against the substrate along a curvilinear path, an oscillation unit having a first roll in both rolling and pivoting engagement with the transfer roll to place the

elastic material onto the transfer roll, an elastic material supply for providing the elastic material to the first roll of said oscillation unit, an oscillating drive connected to oscillate the oscillation unit for generally transversely to the substrate path and a bonding apparatus to secure the curvilinear elastic material to the substrate along the curvilinear path. Optionally the first roll may directly contact the substrate with the elastic material.

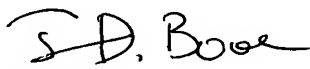
The claimed subject matter is patentable over the '706 publication because the '706 publication does not disclose or suggest each feature of the presently claimed invention, as set forth in representative claims 1 and 12. For example, the '706 publication does not disclose or suggest a combination that includes providing an elastic web of material running in a traveling direction. Also, the '706 publication does not disclose or suggest a combination that includes applying a second web of any type of material. Accordingly, the '706 publication does not disclose or suggest a combination that includes that the shape of a non-elastic web of material is brought to generally coincide with the shape of the adhesive pattern.

#### Conclusion

Accordingly, applicant respectfully requests that this Petition to Make Special be granted.

Respectfully submitted,  
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Date: April 24, 2006

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